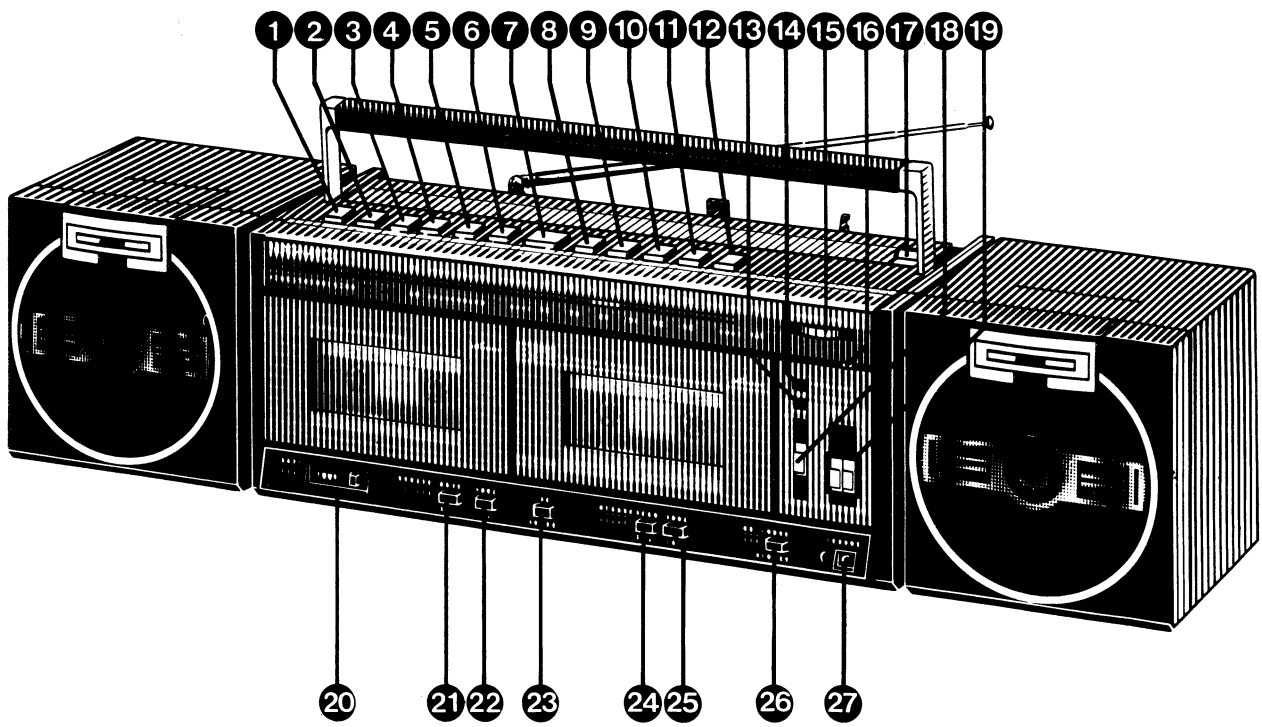
Stereo radio recorder D8568/00/05

Service
Service
Service

Service Manual



38 235 A12

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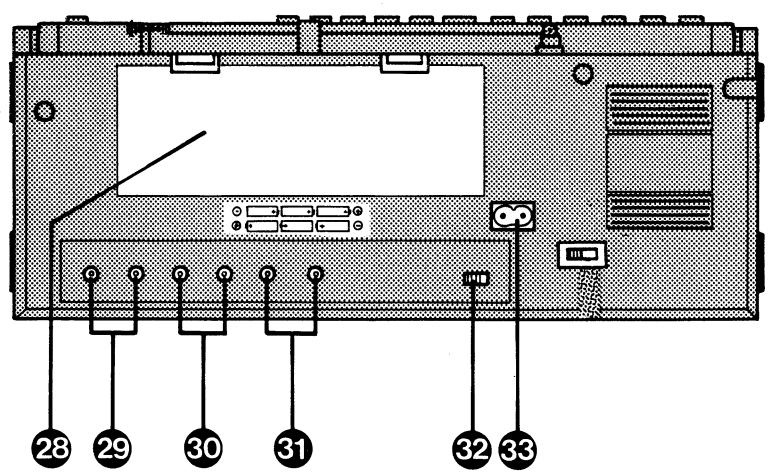
PHILIPS
Published by Service Consumer Electronics

	: 9 V (6× R20)
	: /00-220 V 50 Hz /05-240 V 50 Hz
IF-FM	: 10.7 MHz
IF-AM	: 455 kHz
FM	: 87.5-108 MHz
MW	: 520-1605 kHz
LW	: 150- 270 kHz

Tape speed	: 4.76 cm/sec ± 3% (9.52 cm/sec)
Wow and flutter	: ⩽ 0.3% limit ⩽ 0.16% nominal
Frequency response Total	: 100 Hz-8 kHz +4 dB-8 dB
S/N ratio	: 32 dB limit 40 dB nominal
Track separation	: 50 dB limit 60 dB nominal

1	Deck B		
2	Deck B	S304,S305	
3	Deck B	S304,S305	
4	Deck B	S304,S305	
5	Deck B	S305,S300	
6	Deck B	S305,S300	
7	Synchro dubbing selector	S300,S305	
8	Deck A		
9	Deck A	S304,S305	
10	Deck A	S304,S305	
11	Deck A	S304,S305	
12	Deck A	S305	
13	Power on/batt. check	D301	
14	Stereo	D300	
15	Tuning		
16	Built in		
17	Wave range selector	S1	
18		VR100	
19		VR101	
20	Tape counter		
21	Deck selector	S309	
22	Dubbing speed selector	S310	
23	Tape selector deck B	S311	
24	Tape selector deck A	S311	
25	Mode selector tape/ratio	S301	
26		S307	
27		J301	
28	Battery compartment		
29		J102,J202	
30		J101,J201	
31		J100,J200	
32	Beat cancel selector	S302	
33	V~	J401	



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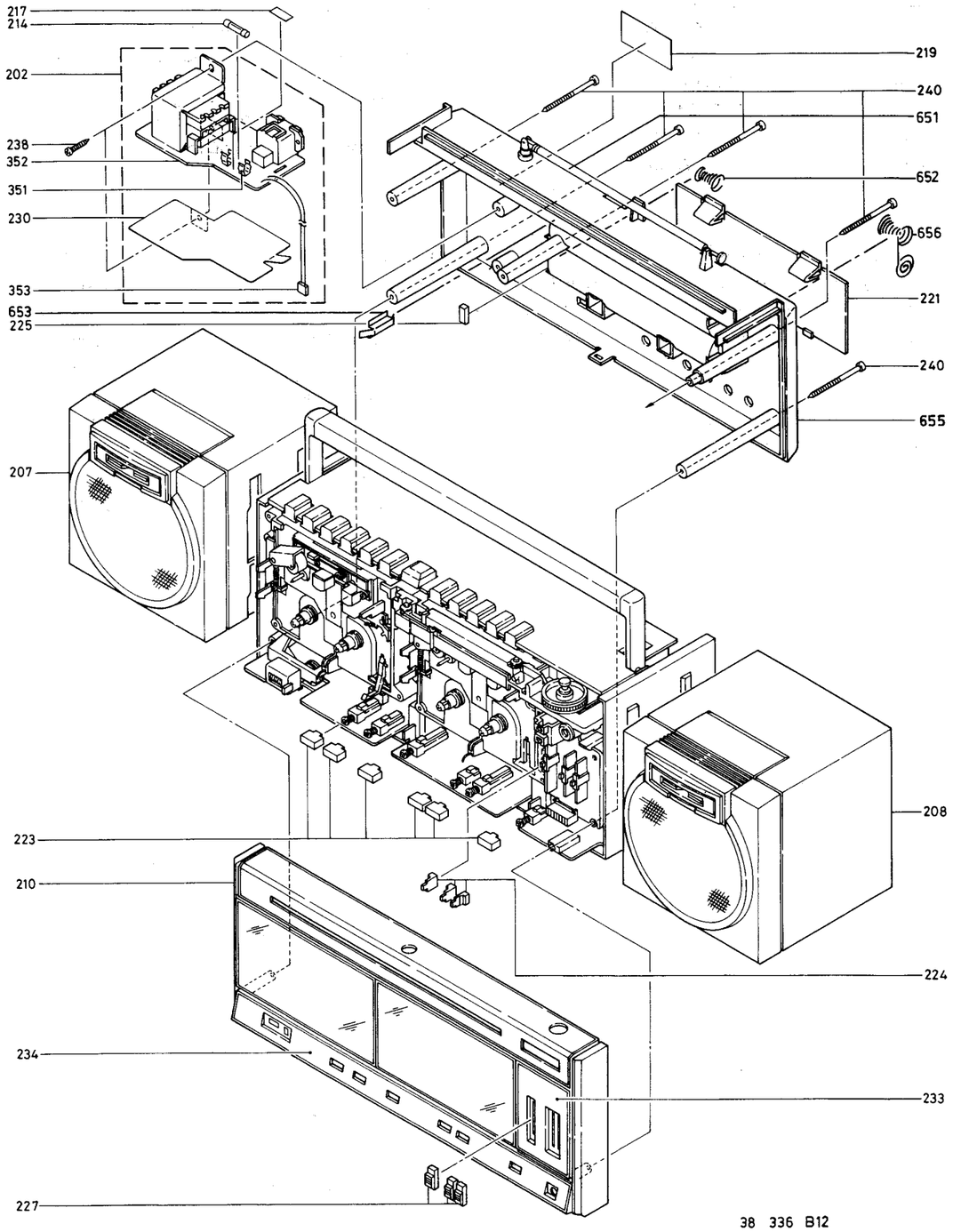
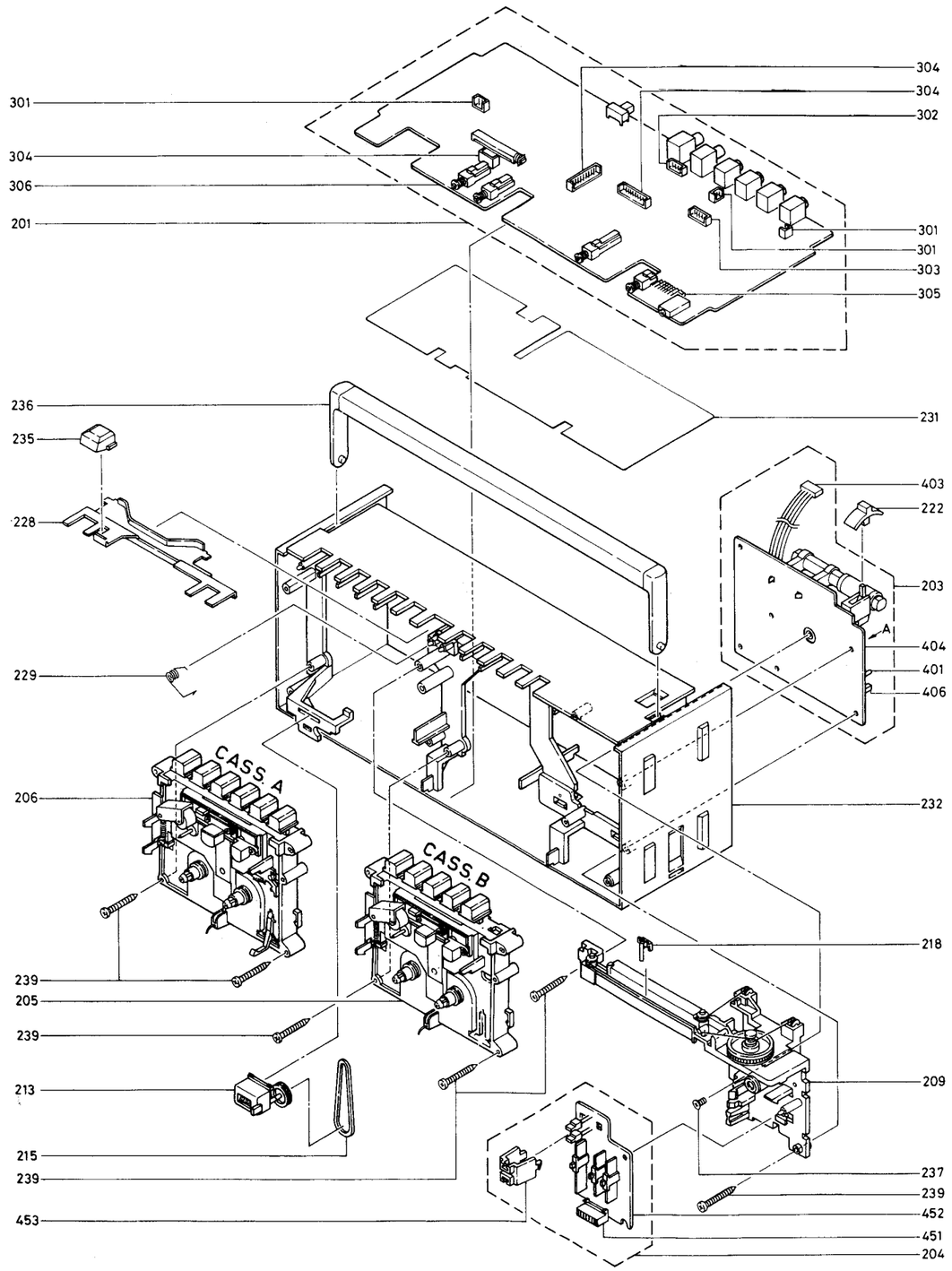
UNIT ASSEMBLY EXPLODED VIEW





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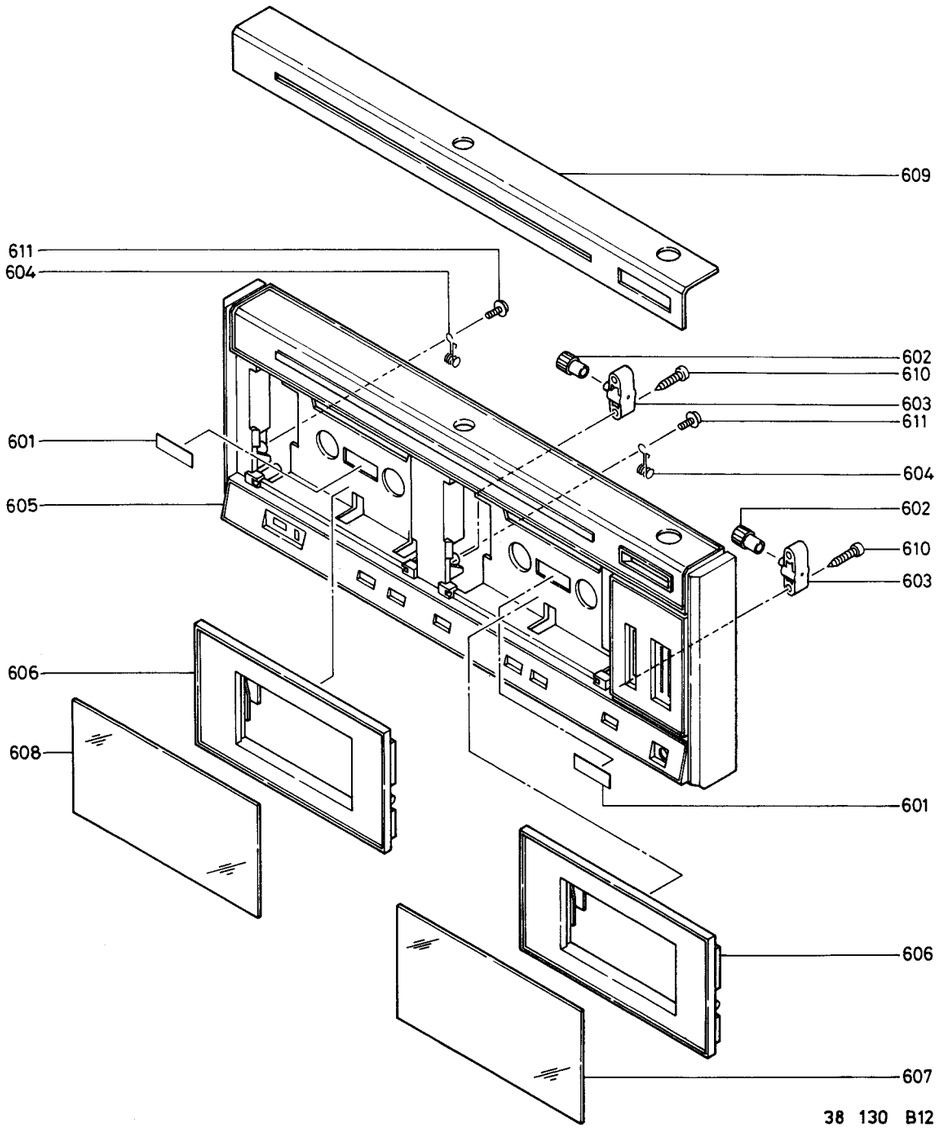
FRONT CABINET UNIT EXPLODED VIEW



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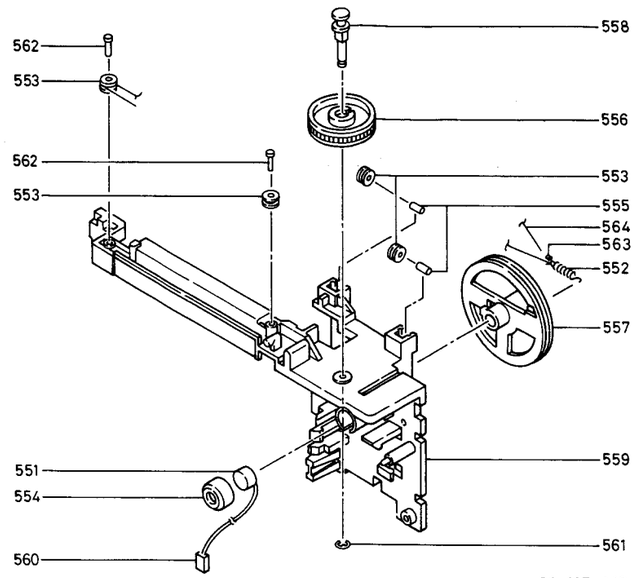
211	4822 443 50678	233	4822 459 80303	608	4822 450 60603
213	4822 349 50216	234	4822 459 80306	609	4822 450 60604
215	4822 358 30487	235	4822 410 24309	651	4822 303 30312
218	4822 450 80961	236	4822 498 30123	652	4822 492 51757
221	4822 443 61621	602	4822 522 31949	653	4822 290 80655
222	4822 410 24307	603	4822 256 90807	655	4822 443 50672
223	4822 410 24308	604	4822 492 41333	656	4822 492 51758
227	4822 411 61155	605	4822 443 50671		
229	4822 492 41332	606	4822 443 61622		
232	4822 443 40233	607	4822 450 60602		

TUNER CHASSIS UNIT EXPLODED VIEW



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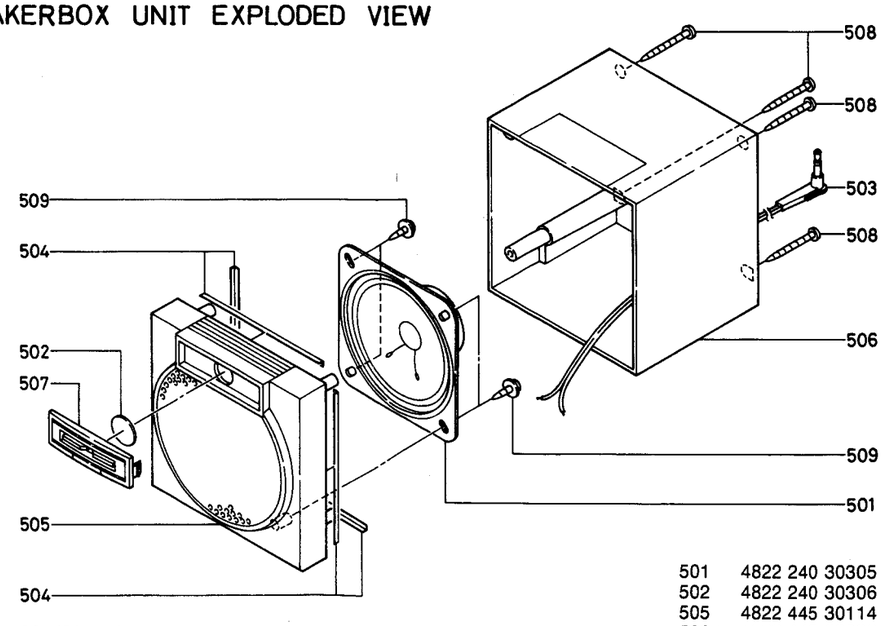
551	4822 242 10049	556	4822 413 41282
553	4822 528 81051	557	4822 528 40257
555	4822 535 91885	558	4822 535 91886
		562	4822 535 91887

SPEAKERBOX UNIT EXPLODED VIEW



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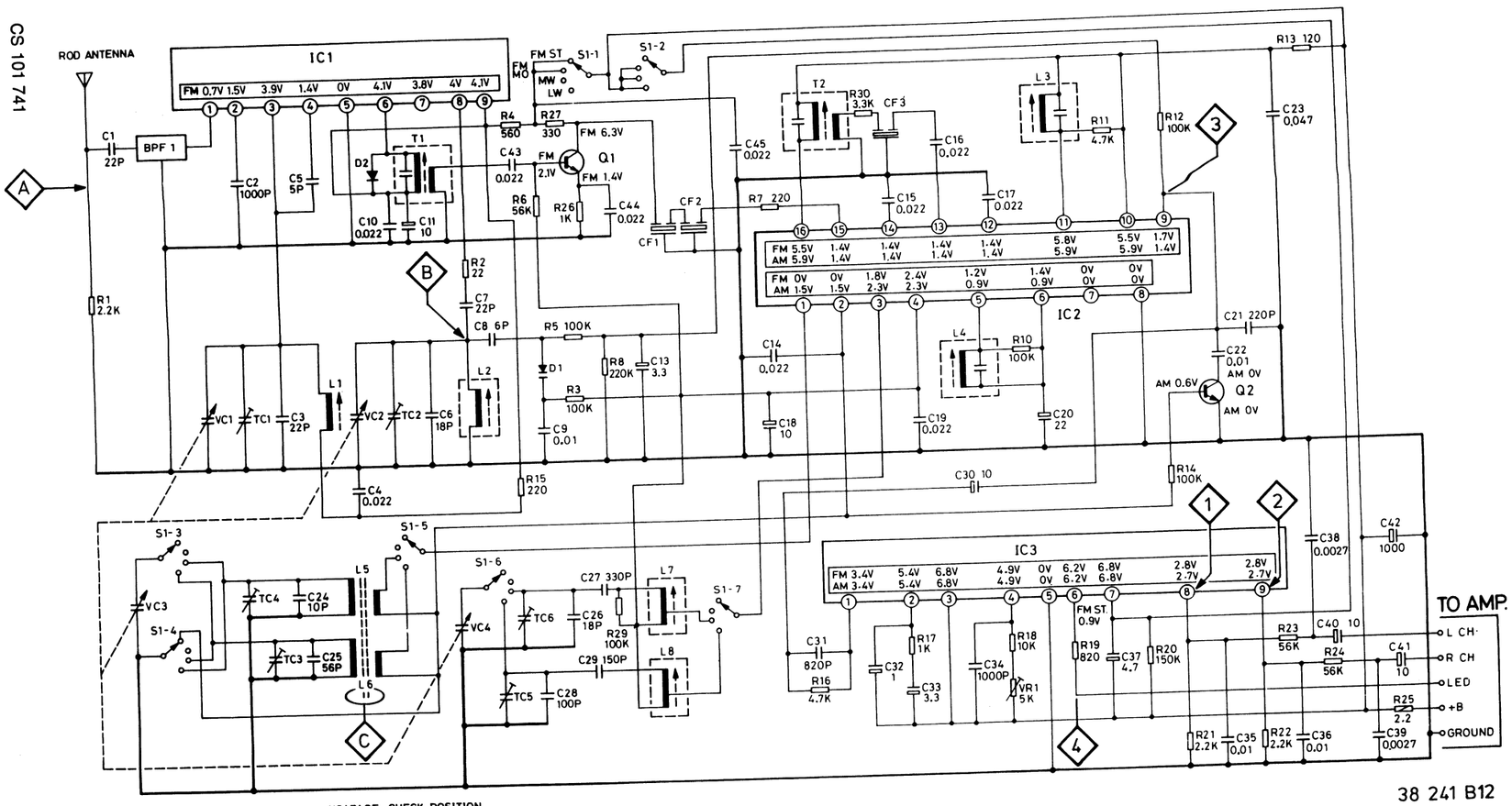
501	4822 240 30305	506 L	4822 445 20032
502	4822 240 30306	506 R	4822 445 20033
505	4822 445 30114	507	4822 458 30449

CS 101 741



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IC 1 ------ TA7358P
IC 2 ------ TA7640AP
IC 3 ------ TA7343P

Q1,2 ------ 2SC945-P

D1 ------ SD115
D2 ------ HV80
D3 ------ RD8.2EB1

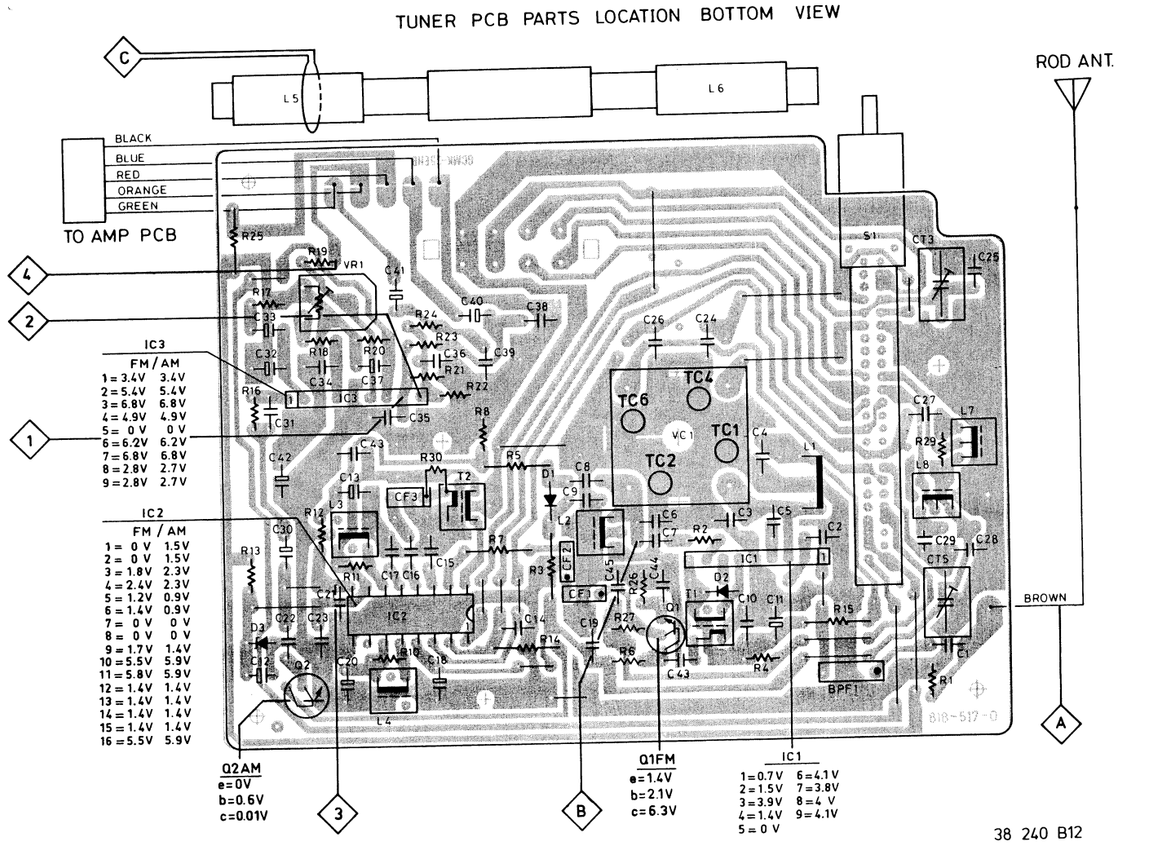
VOLTAGE CHECK POSITION
FM V --- FM POSITION
AM V --- AM POSITION

S1 --- FM STEREO/FM MONO/MW/LW SWITCH (FM STEREO POSITION)

NOTES;
1. ALL RESISTANCE VALUES ARE IN Ω. K=1000Ω M=1000KΩ
2. ALL CAPACITANCE VALUES ARE IN μF. P=10^-6 μF
3. ALL RESISTORS ARE 1/6 WATT, UNLESS OTHERWISE SPECIFIED.
4. VOLTAGES MEASURED FROM POINT INDICATOR TO CHASSIS GROUND WITH V.T.V.M AT LINE VOLUME CONTROL MINIMUM AND NO SIGNAL.

(SPECIFICATIONS AND CIRCUITS SUBJECT TO CHANGE WITHOUT NOTICE FOR IMPROVEMENT.)

TUNER PCB PARTS LOCATION BOTTOM VIEW



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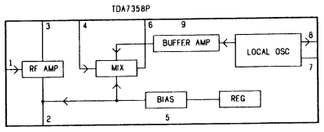
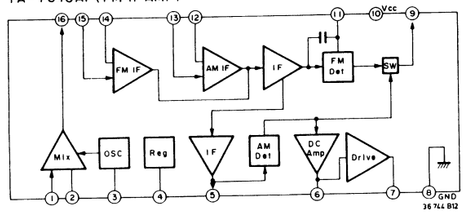
TDA7358P



PRS.00138
DRA AA4

TA-7640AP (FM IF AMP)



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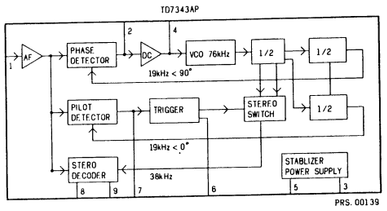
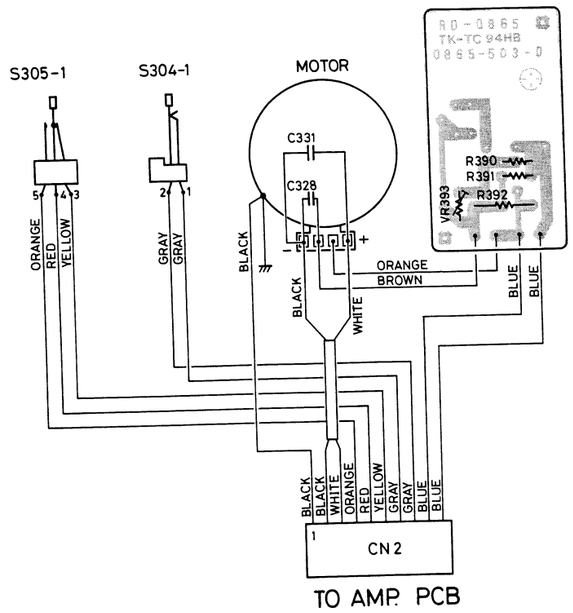
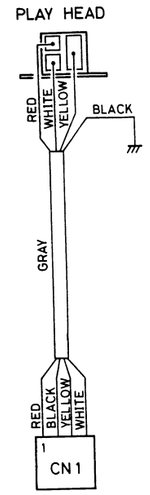
TD7343AP



PRS. 00139

CASSETTE A CIRCUIT DIAGRAM





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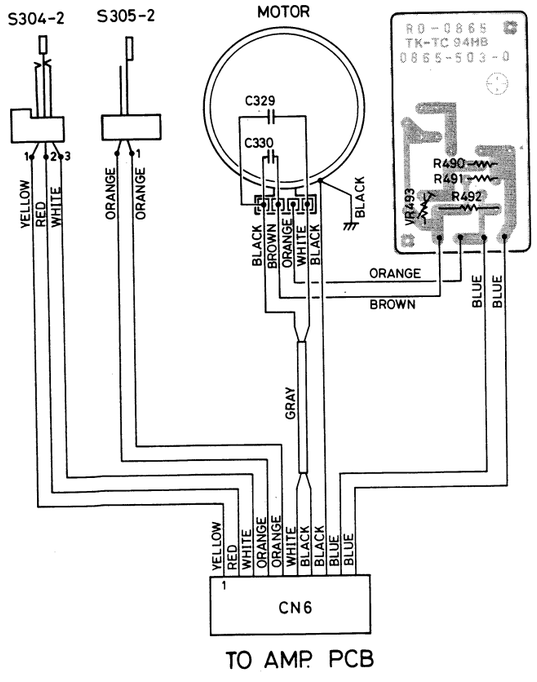
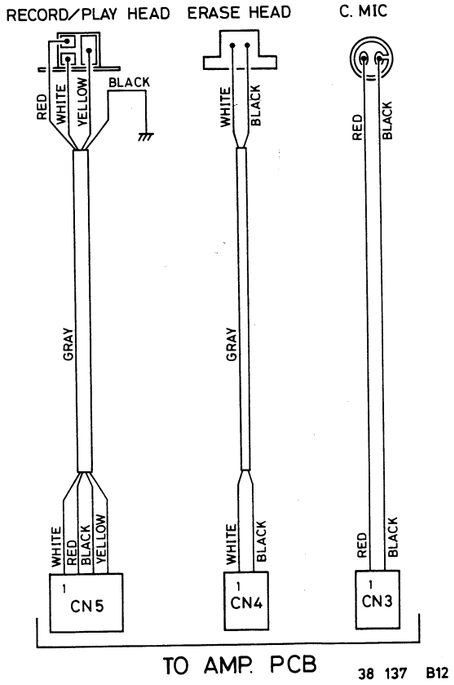
CASSETTE B CIRCUIT DIAGRAM





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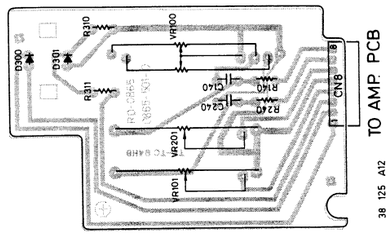
VOLUME PCB PARTS LOCATION BOTTOM VIEW



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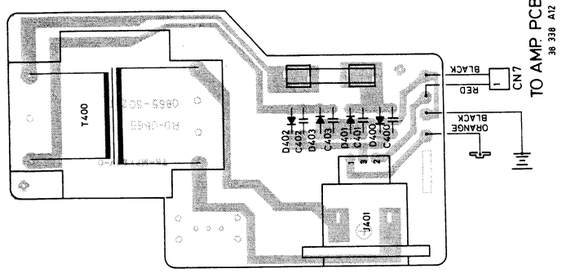
POWER SUPPLY PCB PARTS LOCATION BOTTOM VIEW



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S-1						
MW	455 kHz △F 10 kHz (50 Hz)	Ⓒ	Max. cap.	T2 L4	③ Symm. MAX.	↕
MW 520-1605 kHz	1650 kHz*	Ⓒ	Min. cap.	TC6	③ MAX.	①
	515 kHz*		Max. cap.	L7		
	600 kHz*		▭	L5		
	1400 kHz*		▭	TC4		
LW 150-270 kHz	310 kHz* 145 kHz* 150 kHz 270 kHz	Ⓒ	Min. cap. Max. cap. ▭ ▭	TC5 L8 L6 TC3	③ MAX.	①
FM	10.7 MHz △F 250 kHz 50 Hz	Ⓑ Via 22 µF	Max. cap.	T1 L3	③ Symm. MAX.	
				L3	Symm. ③	
FM 87.5-108 MHz	108.3 MHz,* △F 22.5 kHz	Ⓐ	Min. cap.	TC2		②
	87.4 MHz,* △F 22.5 kHz		Max. cap	L2		
	90 MHz,* △F 22.5 kHz		▭	L1		① max.
	106 MHz,* △F 22.5 kHz		▭	TC1		

↕ Repeat - Herhalen - Répéter - Wiederholen - Repetera - Feutage

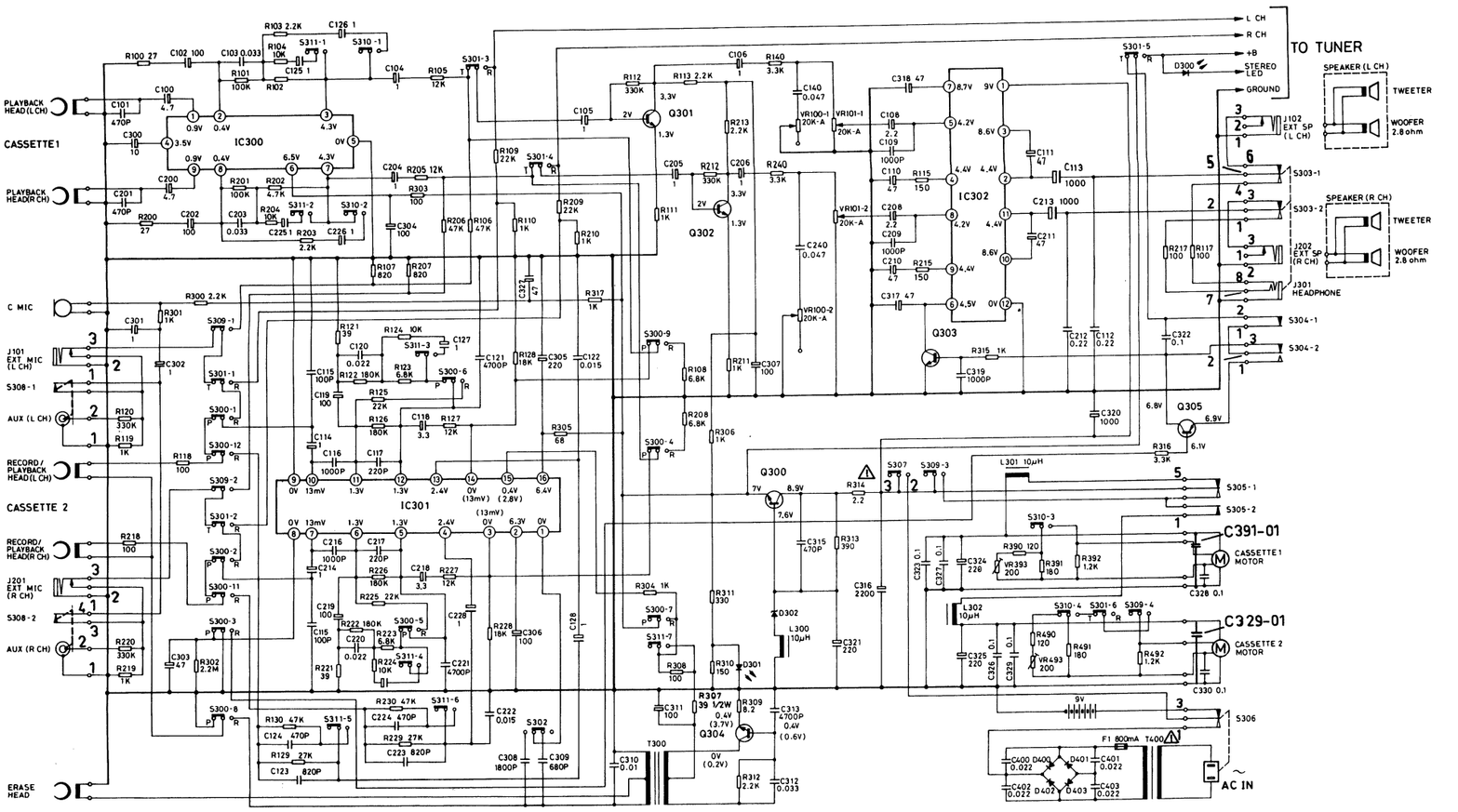
*+1 kHz modulation

Stereo Decoder

FM S-1	No signal .		VR1	Freq. counter ④ 38 kHz ± 50 Hz	

"Bei notwendigem Abgleich ist das Gerät auf die gesetzlich vorgeschriebenen Eckfrequenzen abzugleichen".

CS 101 743



IC300 ——— AN7310
IC301 ——— TA7668AP or TA7668BP
IC302 ——— BA5406

Q300 ——— 2SC2001-K or 2SD476-C
Q301 ~ 304 ——— 2SC1815-GR or 2SC945-P

D300, 301 ——— TLR208
D302 ——— RD8.2EB1
D400 ~ 403 ——— 1N4001 or IN4003

S300 ——— RECORD/PLAYBACK SWITCH (PLAYBACK POSITION)
S301 ——— TAPE/RADIO SWITCH (TAPE POSITION)
S302 ——— BEAT CANCEL SWITCH
S303 ——— SPEAKER/HEADPHONE SWITCH (SPEAKER POSITION)
S304 ——— MUTE ON/OFF SWITCH (ON POSITION)
S305 ——— TAPE ON/OFF SWITCH (ON POSITION)
S306 ——— AC/DC SWITCH (DC POSITION)
S307 ——— POWER ON/OFF SWITCH (OFF POSITION)
S308 ——— C MIC/AUX SWITCH (C MIC POSITION)
S309 ——— DUBBING ON/OFF SWITCH (OFF POSITION)
S310 ——— TAPE SPEED SWITCH (NORMAL POSITION)
S311 ——— TAPE SELECTOR SWITCH (NORMAL POSITION)

2× 2100 mV
2× 2200 mV

-1 dB sine wave
d ≤ 10% at
J102-J202
RL = 2.8 Ω

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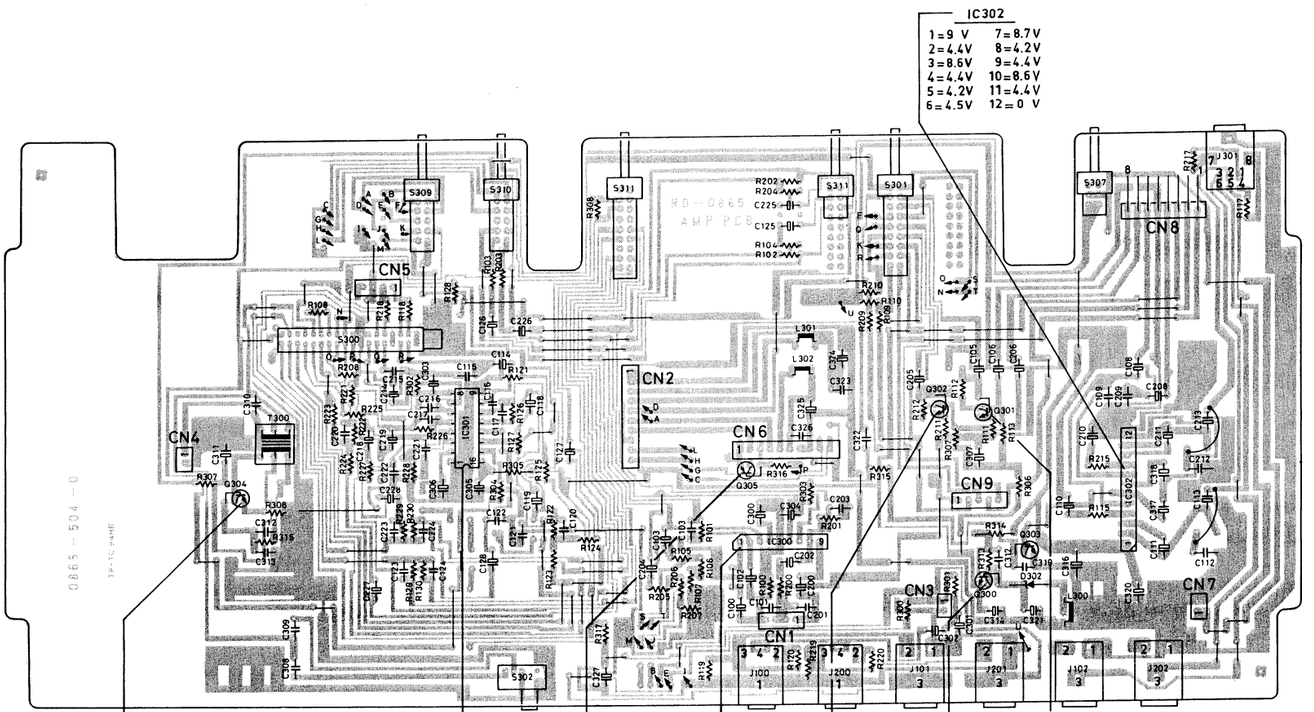

Q304	playback
e=0.4V	3.7V
b=0.4V	0.6V
c=0V	0.2V

IC301
1 = 0 V 9 = 0 V
2 = 6.3 V 10 = 13 mV
3 = 0 V 11 = 1.3 V
4 = 2.4 V 12 = 1.3 V
5 = 1.3 V 13 = 2.4 V
6 = 1.3 V 14 = 0 V
7 = 13 mV 15 = 0.4 V
8 = 0 V 16 = 6.4 V

Q305
e=6.9V
b=6.1V
c=6.8V

IC300
1 = 0.9 V 7 = 4.3 V
2 = 0.4 V 8 = 0.4 V
3 = 4.3 V 9 = 0.9 V
4 = 3.5 V
5 = 0 V
6 = 6.5 V

Q302
e = 1.3 V
b = 2 V
c = 3.3 V

Q300
e = 7 V
b = 7.6 V
c = 8.9 V

Q301
e = 1.3 V
b = 2 V
c = 3.3 V

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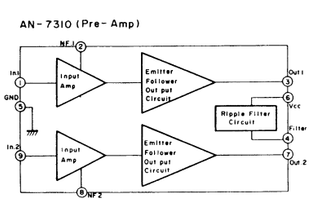
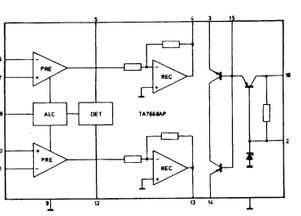
AN-7310 (Pre-Amp)





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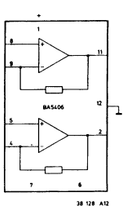

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WIRING DIAGRAM

ROD ANTENNA

MOTOR

S305-1

S304-1

P. HEAD

C331

C328

BROWN

ORANGE

BLUE

BLUE

BLACK

WHITE

BLACK

ORANGE

RED

YELLOW

GRAY

GRAY

RED

WHITE

YELLOW

BLACK

GRAY

GREEN

ORANGE

RED

BLUE

BLACK

BROWN

BATTERY 9V

MOTOR

C329

C330

BROWN

ORANGE

BLACK

WHITE

S304-2

S305-2

R/P HEAD

E. HEAD

C.MIC

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CS 101 744

CASSETTE DECK A AND B

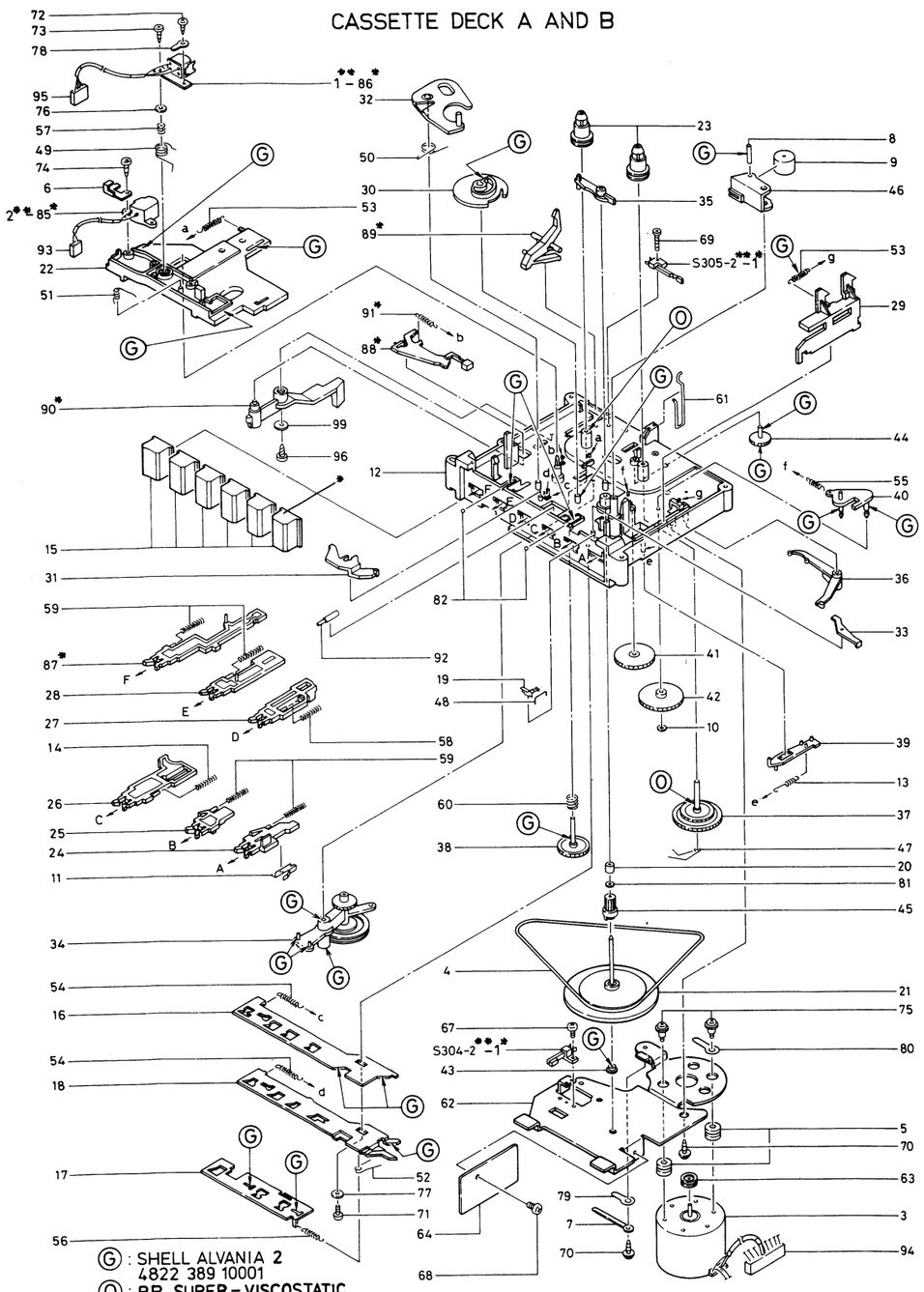

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Fig. 1

Adjustment	Cassette	Recorder in position	Frequency counter to J102	Adjust with	mV-meter on J102/J202
Tape speed Cassette deck A	SBC420 3150 Hz	Play Dubbing Speed selection: NORMAL - HIGH -	3150 Hz + 0.5% 6300 Hz + 0.5%	Preset in motor VR393	
Tape speed cassette deck B	SBC420 3150 Hz	Play - Dubbing Speed selector: NORMAL - HIGH -	3150 Hz + 0.5% 6300 + 0.5%	Preset motor VR493	
Azimuth R/P head	SBC420 8 kHz	Play		Screw 73 R/P heads see Fig. 1	Max. and equal output L and R
Take up torque	811/CTM 30-50 g/cm	Play			

1	4822 249 30096	29	4822 403 30466	54	4822 492 32528
2	4822 249 30097	30	4822 522 31943	55	4822 492 32529
3	4822 361 20599	31	4822 403 20192	56	4822 492 32531
4	4822 358 30488	32	4822 403 20193	57	4822 492 51752
5	4822 462 40818	33	4822 403 20194	58	4822 492 51753
8	4822 535 91879	34	4822 403 52469	59	4822 492 51754
9	4822 528 90529	35	4822 403 20201	60	4822 492 51755
10	4822 403 10222	36	4822 403 20196	61	4822 492 63249
11	4822 492 63247	37	4822 522 20351	63	4822 528 81049
13	4822 492 32521	38	4822 522 31944	75	4822 502 12031
14	4822 492 51751	39	4822 403 10242	82	4822 520 40178
15	4822 410 24301	40	4822 403 20198	85	4822 249 40183
16	4822 403 30456	41	4822 522 31945	86	4822 249 10243
17	4822 403 30468	42	4822 522 31946	87	4822 403 30465
18	4822 403 30458	43	4822 462 71377	88	4822 403 30467
19	4822 492 63248	44	4822 522 31947	89	4822 403 20197
20	4822 520 30416	45	4822 522 31948	90	4822 403 20199
21	4822 528 60225	46	4822 403 40204	91	4822 492 32532
22	4822 464 50456	47	4822 492 41326	92	4822 535 91884
23	4822 528 10521	48	4822 403 52471	S304-1	4822 277 60236
24	4822 403 30459	49	4822 492 41327	S304-2	4822 277 60233
25	4822 403 30461	50	4822 492 41328	S305-1	4822 277 60234
26	4822 403 30469	51	4822 492 41329	S305-2	4822 277 60235
27	4822 403 30471	52	4822 492 41331		
28	4822 403 30464	53	4822 492 32527		

Only those parts of which the service code numbers are stated are normal service parts.

-IC-		
IC1	TA7358P	4822 209 82489
IC2	TA7640AP	4822 209 81818
IC3	TA7343AP	4822 209 82492
IC300	AN7310	4822 209 81549
IC301	AN7668BP	4822 209 83297
IC302	BA5406	4822 209 82435
-TR-		
Q300	25D467-C	4822 130 41521
Q301	2SC945-P	4822 130 41198
Q302	2SC945-P	4822 130 41198
Q300	2SC945-P	4822 130 41198
Q304	2SC945-P	4822 130 41198
Q305	25A1015-GR	4822 130 42076
Q1	2SC945-P	4822 130 41198
Q2	2SC945-P	4822 130 41198
-D-		
D1	SD115	4822 130 31666
D2	Diode HV80	4822 130 31713
D300	LED TLG208	4822 130 32915
D301	LED TLR208	4822 130 31911
D302	RD8.2EB1	4822 130 32913
D400	SM-1A-02	4822 130 31438
D401	SM-1A-02	4822 130 31438
D402	SM-1A-02	4822 130 31438
D403	SM-1A-02	4822 130 31438
-R-		
VR1	Potm. 5k	4822 100 20158
VR100	Tone control 20k	4822 105 10658
VR101	Volume L control 20k	4822 105 10657
VR201	Volume R contol 20k	4822 105 10657
VR393	200 Ω cassette A	4822 100 20157
VR493	200 Ω cassette B	4822 100 20157
-C-		
VC1	Poly-varicon	4822 125 50283
TC3	Trimmer	4822 125 50284
TC5	Trimmer	4822 125 50284

-L-	
L1	4822 152 10103
L2	4822 157 52053
L3	4822 157 52049
L4	4822 152 10098
L6-L5	4822 158 60536
L7	4822 152 10105
L8	4822 152 10104
T1	4822 157 52049
T2	4822 152 10098
L300	4822 156 21091
L601	4822 152 10097
L302	4822 152 10097
T300	4822 146 21061
T400/00	4822 146 21063
T400/05	4822 146 21065
BPF1	4822 157 51681
CF1	4822 242 71213
CF2	4822 242 71213
CF3	4822 242 71214
CF3	4822 242 71215
-Miscellaneous-	
S1	4822 276 11558
S300	4822 277 21029
S301	4822 276 11547
S302	4822 277 21031
S307	4822 276 11548
S309	4822 276 11549
S310	4822 276 11549
S311-1	4822 276 11548
S311-2	4822 276 11547
J100	4822 267 30653
J101	4822 267 30652
J102	4822 267 30652
J200	4822 267 30654
J201	4822 267 30652
J202	4822 267 30652
J301	4822 267 30651
J401	4822 267 30655
Fuse holder F1	4822 256 30277

Carbon film 0.2 W	70°C	5%	
Carbon film 0.33 W	70°C	5%	
Metal film 0.33 W	70°C	5%	
Carbon film 0.5 W	70°C	5%	
Carbon film 0.67 W	70°C	5%	
Carbon film 1.15 W	70°C	5%	

© Chip component

Ceramic plate Tuning ≤ 120 pF NP.0		2%
Ceramic plate Others		−20/+80%
Polyester flat foil		10%
Metalized polyester flat film		10%
Polyester flat foil small size (Mylar)		10%
Polysterene film/foil		1%
Tubular ceramic		
Miniature single		
Subminiature tantalum		± 20%

*a	= 2,5 V
b	= 4 V
c	= 6,3 V
d	= 10 V
e	= 16 V
f	= 25 V
g	= 40 V
h	= 63 V
j	= 100 V
l	= 125 V
m	= 150 V
n	= 160 V
q	= 200 V
r	= 250 V
s	= 300 V
t	= 350 V
u	= 400 V
v	= 500 V
w	= 630 V
x	= 1000 V
A	= 1,6 V
B	= 6 V
C	= 12 V
D	= 15 V
E	= 20 V
F	= 35 V
G	= 50 V
H	= 75 V
I	= 80 V

27 037A/C

(GB) MAINTENANCE

It is recommended to clean the recorder and to lubricate the principal lubrication points after approx. 500 hours of operation.

To be cleaned with alcohol or spirit:
- Erase head
- Recording/playback head
- Belts
- Capstan
- Pressure roller

(NL) ONDERHOUD

Aanbevolen wordt het apparaat na ca. 500 bedrijfsuren schoon te maken en op de belangrijkste punten te smeren.

Schoonmaken met alcohol of spiritus:
- Wiskop
- Opneem-/weergeefkop
- Snaren
- Toonas
- Drukrol

(F) ENTRETIEN

L'appareil devra être nettoyé env. 500 heures de marche et lubrifié aux points les plus importants.

Nettoyer les éléments suivants à l'alcool ou à l'alcool à brûler:
- Tête effacement
- Tête enregistrement/reproduction
- Corroies
- Cabestan
- Galet presseur

(D) WARTUNG

Es empfiehlt sich, das Gerät nach ca. 500 Betriebsstunden zu reinigen und die wichtigsten Schmierpunkte zu schmieren.

Reinigen mit Alkohol oder Spiritus:
- Löschkopf
- Aufnahme/Wiedergabe-kopf
- Antriebsriemen
- Tonachse
- Andruckrolle

(I) MANUTENZIONE

E consigliabile pulire l'apparecchio dopo circa 500 ore di funzionamento e di lubrificarne i punti principali.

Pulire con alcool
- Testina di cancellazione
- Testina di registrazione/riproduzione
- Cinghie
- Cabstan
- Rullo preminastro

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.